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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,340	02/13/2004	Kishore K. Kamath	Kamath 10-2-2	8218
8933	7590	04/13/2007	EXAMINER	
DUANE MORRIS, LLP IP DEPARTMENT 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103-4196			LI, SHI K	
			ART UNIT	PAPER NUMBER
			2613	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/13/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/779,340	<b>Applicant(s)</b> KAMATH ET AL.	
	<b>Examiner</b> Shi K. Li	<b>Art Unit</b> 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/13/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakano (U.S. Patent 6,292,497 B1).

Regarding claims 1 and 8-9, Nakano discloses in FIG. 2 an optical transmitter with power regulator. FIG. 1 comprises photodetector 82 for sensing optical power, temperature sensor 10 for sensing temperature, current controllers 40, 41 and 42 for regulating power of output optical signal in response to sensed temperature and power.

Regarding claims 2 and 11, Nakano teaches in col. 2, line 63-col. 3, line 2 that the output power of the transmitter is regulated to be constant.

Regarding claims 3 and 10, Nakano teaches an uncooled optical transmitter.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4-7 and 12-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano (U.S. Patent 6,292,497 B1) in view of Ledlow (U.S. Patent 6,476,716 B1).

Nakano has been discussed above in regard to claims 1-3 and 8-11. Regarding claims 4-5 and 12-14, the difference between Nakano and the claimed invention is that Nakano does not teach a temperature controlled variable resistor (TCVR). Ledlow teaches a TCVR for controlling current. Ledlow teaches in FIG. 3A a variable current source 300. One of ordinary skill in the art would have been motivated to combine the teaching of Ledlow with the optical transmitter of Nakano because the TCVR of Ledlow provides accurate and efficient control of laser diode over a wide range of temperature in a single small package. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a TCVR, as taught by Ledlow, in the optical transmitter of Nakano because the TCVR of Ledlow provides accurate and efficient control of laser diode over a wide range of temperature in a single small package.

Regarding claim 6, Nakano teaches storing bias current values in memory 50 for various temperatures and Ledlow teaches storing predetermined values in look-up table 304. The use of interpolation for determining function values is well known in the art.

Regarding claim 7, Nakano teaches in FIG. 1A and FIG. 1 B temperature values  $t_1$ ,  $t_2$  and  $t_3$  and teaches in col. 4, line 46 a temperature range of  $-40^{\circ}$  to  $+115^{\circ}$  C. Ledlow teaches a temperature range of  $-40^{\circ}$  to  $+102^{\circ}$  C. Therefore, it is obvious to use any temperature values in between as predetermined temperature values.

Regarding claim 15, Nakano teaches in col. 2, line 63-col. 3, line 2 that the output power of the transmitter is regulated to be constant.

Regarding claim 16, Nakano teaches an uncooled optical transmitter.

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Regarding claims 17-18, Ledlow teaches in FIG. 3 lookup table 304 and in col. 3, lines 30-45 that each location of the lookup table stores a resistance corresponding to a particular temperature value.

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakano and Ledlow as applied to claims 4-7 and 12-18 above, and further in view of Levinson (U.S. Patent 5,019,769).

Nakano and Ledlow have been discussed above in regard to claims 4-7 and 12-18. The difference between Nakano and Ledlow and the claimed invention is that Nakano and Ledlow do not teach a computer. Levinson teaches in FIG. 3 a transmitter control scheme comprising computer 202. One of ordinary skill in the art would have been motivated to combine the teaching of Levinson with the modified optical transmitter because a computer automates the procedure and allows modification or update of the procedure to be done easily. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to control the output power of the optical transmitter with a computer, as taught by Levinson, in the modified optical transmitter because a computer automates the procedure and allows modification or update of the procedure to be done easily.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl

11 April 2007



**Shi K. Li**  
**Patent Examiner**